

Peabody, Daniel (EGLE)

From: Peabody, Daniel (EGLE)
Sent: Tuesday, March 17, 2020 9:09 AM
To: saric.james@epa.gov
Cc: Mills, Mark (DNR); john kern; Keiser, Jeff/MKE; Kirchner, Scott; Kline, David (EGLE); Walczak, Joseph (EGLE); Ruhala, Sydney (EGLE); Roth, Charles; Canar, John; Bennett, Brian; Roberts, Keegan
Subject: EGLE Comments on Area1 RD Approach for Sediment Alternative
Attachments: EGLE Comments Kalamazoo River OU5 Area 1 RD Sediment Alternative.pdf

Jim,

EGLE continues to have some significant concerns regarding the proposed approach to implement the sediment alternative and has compiled those concerns in a formal comment letter (attached). EGLE also has concerns over the proposed approach to implement the floodplain alternative. However, consistent with the approach in the ROD, EGLE has separated comments related to the sediment and floodplain alternatives to better focus the scope of our comments and any follow-up discussions. Comments on the approach to implement the floodplain alternative will be submitted under a separate cover letter in the near future.

With the COVID-19 response and reduced work schedule a hard copy of the letter may not be mailed today but will be mailed as soon as possible.

Please let me know if you have any questions.

Thanks,

Daniel Peabody

Environmental Quality Analyst

Remediation and Redevelopment Division

Michigan Department of Environment, Great Lakes, and Energy

***517-285-3924* NEW PHONE NUMBER** | PeabodyD@Michigan.gov

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GRETCHEN WHITMER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY
LANSING



LIESL EICHLER CLARK
DIRECTOR

March 17, 2020

VIA E-MAIL and U.S. MAIL

Mr. James Saric
Remedial Project Manager
United States Environmental Protection Agency
Region 5 77 West Jackson Boulevard (SR-6J)
Chicago, Illinois 60604-3511

Dear Mr. Saric:

SUBJECT: Michigan Department of Environment, Great Lakes, and Energy (EGLE)
Comments on Proposed Remedial Design and Approach for the
Environmental Protection Agencies (EPA's) Sediment Alternative-
Alternative S-3A, Operational Unit 5 (OU5) Area 1, Allied Paper,
Inc./Portage Creek/Kalamazoo River Superfund Site

The Area 1 remedy selected by EPA and described in the Record of Decision dated September 2015 included sediment and floodplain alternatives, each with their own components. In 2016, A Unilateral Administrative Order for Remedial Design and Remedial Action (Comprehensive Environmental Response, Compensation and Liability Act Docket No.: V-W-17-C-002) was issued to Georgia-Pacific LLC, International Paper Company and Weyerhaeuser Company (Respondents). The 95% Remedial Design Report is due for submittal to the Agencies on June 30, 2020, and implementation of various remedial actions to address sediment and floodplain risks is imminent. Although EGLE has over-arching concerns with the remedial approaches presented to-date for various components of the floodplain alternative EGLE comments included here-in pertain only to remedial actions associated with the sediment alternative, specifically the stretches of river referred to as the remedial reach and Crown Vantage side channel.

EGLE has concerns over the proposed sediment remedial strategy specifically related to design targets, constructability, control of work, hydrodynamic modeling, sediment sampling and potential ecological injury, and believes additional discussion on these topics to refine and potentially alter or augment the proposed approach will be necessary. The detailed comments included below are the result of EGLE's participation in Area 1 Remedial Design Work Group Meeting on February 5, 2020, and subsequent review of the presentation slides, and review of the Response To Comments provided for the Area 1 Pre-Design Investigation Work Plan, Addendum 7 – Remedial Reach Sediment Sampling Area 1 30% Remedial Design. The detailed comments (attached) provide a high-level summary of the State's concerns related to the sediment remedy, as it is currently understood, with the goal of initiating additional

discussion on these topics to discuss the proposed approach in finer detail ahead of the planned remedial action and 95% Remedial Design submittal.

As previously stated, this memorandum is only meant to convey comments and concerns related to the approach proposed to-date associated with implementing Sediment Remedy S-3A. Comments and concerns related to the floodplain alternative and its' components will be submitted under a separate cover letter to reduce and confine the scope of the comment letters and follow-up discussions to their respective alternative.

If you have additional questions concerning this matter, please contact me at 517-285-3924; PeabodyD@michigan.gov; or EGLE, Environmental Quality Analyst, Remediation and Redevelopment Division, P.O. Box 30426, Lansing, Michigan 48909-7926. Due to the ongoing COVID-19 response and reduced work schedule the hard-copy of this letter may not be mailed today but will be placed in the mail as soon as possible.

Sincerely,

A handwritten signature in dark ink, appearing to read "Daniel Peabody". The signature is fluid and cursive, with the first name "Daniel" being more prominent than the last name "Peabody".

Daniel Peabody
Environmental Quality Analyst
Remediation and Redevelopment Division

Enclosure

cc/enc: Dr. John Canar EPA
Mr. Chuck Roth, EPA
Dr. Keegan Roberts, CDM Smith
Mr. Brian Bennet, CDM Smith
Mr. Scott Kirchner, CDM Smith
Mr. Jeff Keiser, Jacobs Engineering
Dr. John Kern, Kern Statistical Services
Mr. Mark Mills, Michigan Department of Natural Resources
Mr. David Kline, EGLE
Mr. Joe Walczak, EGLE
Ms. Sydney Ruhala, EGLE

Kalamazoo River Superfund Site

**OU-5 Area 1, Allied Paper, Inc./Portage
Creek/Kalamazoo River Superfund Site, EGLE
Comments on Proposed Remedial Design and
Approach for EPA's Selected Sediment
Alternative - Alternative S-3A**

- It was not clear how the target dredge depth will be determined for areas with polychlorinated biphenyl (PCB) concentrations less than 50 parts-per-million (ppm). Additional information should be provided on how the dredge prisms will be vertically defined and how this “polygon” approach to dredge prisms will impact dredging operations and the post-dredge sediment surface (e.g., sloughing of side walls).
 - Both Verburg Park (February 5 Presentation, Slide Figure 12) and Crowne Vantage Side Channel (February 5 Presentation, Slide 7) (attached) could be considered to function as sediment traps and, as such, depth of contamination would be expected to be fairly consistent throughout each area.^{1,2}
 - This conceptual model should be considered when developing dredge prisms, as opposed to a point-by-point, legalistic interpretation of a small number of individual cores defining sharp breaks in dredge elevations that may reflect little more than random variation between adjacent cores. Lacking more resolved sampling, particularly in Verburg Park, a more practical and reliable dredge cut elevation should be based on an upper percentile of the depth of contamination distribution in these areas. Ideally, small analytical variations between adjacent Thiessen polygons should not drive large changes in corresponding dredge prism depths.
- Uncertainty in the depth of contamination can result in incomplete removal of contaminated material and can increase residuals if multiple dredge passes are required³. Depth of contamination should be clearly delineated in order to limit the number of dredge passes and to minimize residuals.
- Additional information is needed on how confirmation sampling will be conducted to identify missed contaminated sediment inventory and confirm target surface-area weighted average concentrations (SWACs).
- For areas where a combination of dredging and capping is being

proposed, clarification is needed on what range of concentrations are expected to be contained in-place. Cap designs will require such site-specific information as advective seepage rates and porewater contaminant concentrations to design the various cap components. Provide details on when and how this information will be collected.

- Slide 4 of the February 5 presentation states that: “The estimated removal depth in identified hot spots ranges from 24-40 inches.” During the presentation it was stated that PCBs have been found deeper than 40 inches. Provide information on the concentrations and depths of PCBs deeper than 40 inches, and how such materials will be addressed during remediation.
- Significant discrepancies between Remedial Investigation and Feasibility Study (RI/FS) information and design information (e.g., removal footprints) need to be identified and explained to ensure that such issues have been appropriately addressed, and such discrepancies are avoided and/or addressed on other areas of the site.
- Recent data collected from Area 1 are known to be biased low and the PCB concentrations being reported may not be representative of the actual PCB concentrations in the field^{4,5,6}. Remedial Design data are being used absent without consideration of this low bias and lack of representativeness. Additional field sampling and laboratory analysis to delineate a few remaining sediment remediation areas is scheduled for this field season and confirmation sampling following sediment remediation will be necessary to ensure risk-based design targets are achieved. Currently no plan is in-place to rectify the analytical issue and ensure the design and confirmation data collected is representative.
- During the Work Group Meeting, the Respondents proposed changing the selected remedy at the furthest upstream “hotspot” in the remedial reach known as KPT-19 from excavation to a limited excavation and/or capping alternative, the components of which would be evaluated under a Focused Feasibility Study that would be submitted at a later date. At this time EGLE believes it is presumptive to proposed changing the remedy. The upstream boundary of KPT-19 is currently undelineated. Several, known historic PCB sources exist upstream of KPT-19 and RI/FS sediment data in these locations showed removal may be necessary, but these areas have not been revisited and resampled during Remedial Design. A robust and well-planned data collection effort and rigorous technical evaluation would be necessary to evaluate whether or not the suggested changes to the remedy are feasible and that analysis hasn’t been completed with the 95% Remedial Design Report being due on June 30, 2020. EGLE would not support the decision to knowingly leave behind large amounts of grossly contaminated, TSCA-regulated PCB remediation waste (>50ppm PCBs) in the river

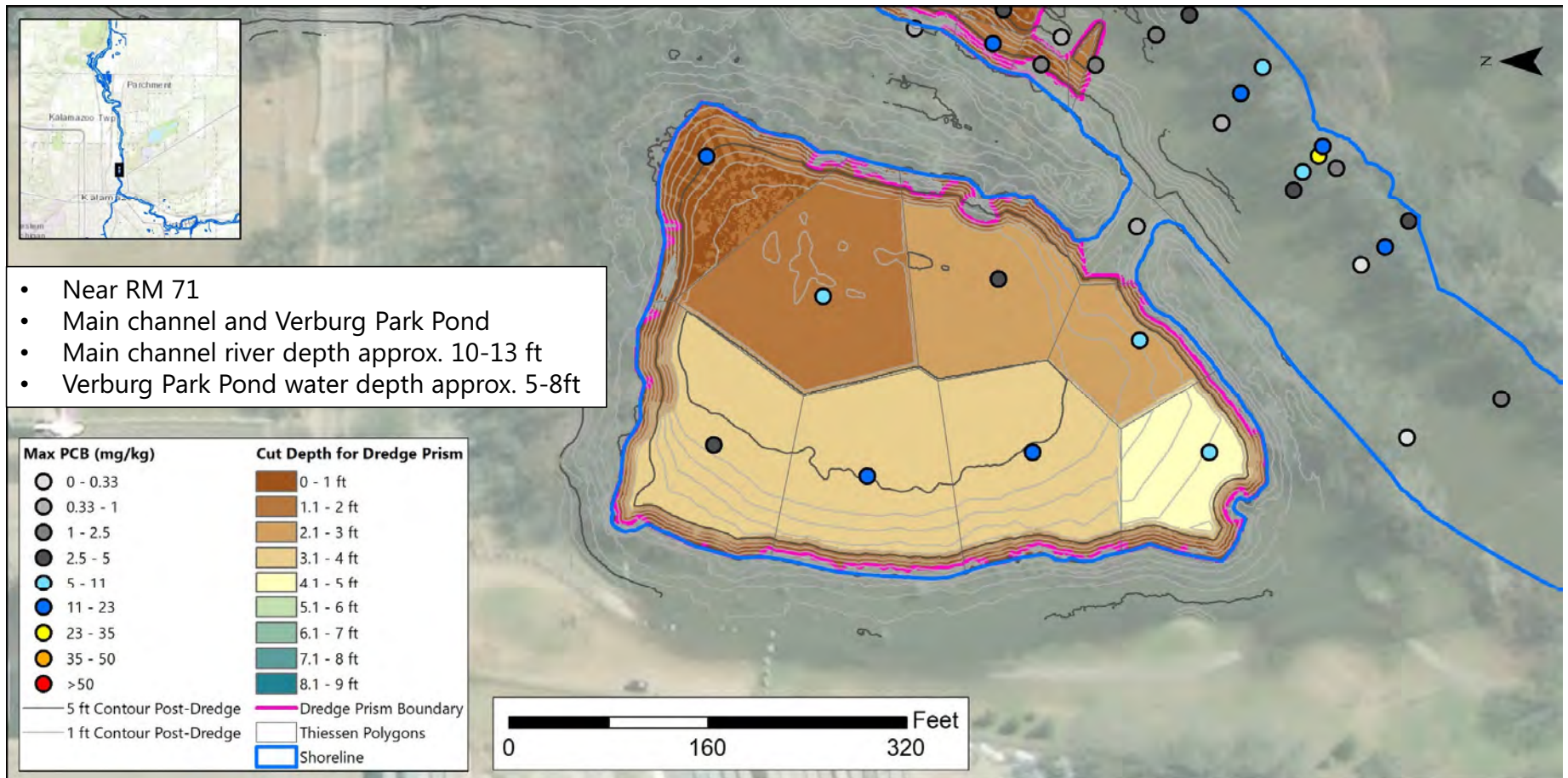
- channel or the addition of large-amounts of un-natural fill materials above the current riverbed elevation.
- The modeling presented for KPT-19 uses HEC-RAS for the hydraulic and sediment transport calculations. HEC-RAS has not been previously applied for sediment transport on the Kalamazoo River Superfund site, and it is not clear if this model is appropriate for sediment transport here. Key modeling concerns which should be addressed include:
 - Model performance is unvalidated at the higher flows relevant for sediment stability assessment.
 - Although the model performs reasonably well for the presented water levels and flow rates, performance relative to data has been examined only for flow events with a recurrence interval less than 2 yrs. This limitation should be explicitly noted and, based on data availability, addressed.
 - An uncalibrated sediment transport model is being used to assess sediment stability issues.
 - Upstream solids boundary condition is unknown and was essentially “created” for the analyses presented on Feb 5. Empirical data should be used to define the boundary conditions.
 - Model performance in terms of erosion and deposition depths is unconstrained and should be addressed.
 - The use of the laterally-averaged HEC-RAS model for assessing sediment stability is in contrast to the use of the 2D Delft3D model in Area 6 for assessing sediment stability. It is not clear if HEC-RAS is the most suitable model choice for assessing sediment stability at this site. For instance, are there lateral variations in depth of contamination that may be relevant for the assessment of sediment stability? The rationale for model selection and limitations of the model in remedial decision making (e.g., averaging of cross-sectional deposition/erosion) should be presented in detail.
 - An extensive mussel survey and relocation effort may be necessary to ensure that dredging activities completed in this area do not unduly harm the native mussel population. While the remediation footprint in this stretch is large, the overall footprint is no larger than the remedial footprint in Otsego Township dam where a full mussel survey and relocation effort consistent with State protocols was implemented. EGLE recommends engaging State regulatory subject

matter experts on this topic to determine what will be required to ensure the State's expectations for mussel survey and relocation are met.

References

1. Allied Paper, Inc./Portage Creek/ Kalamazoo River Superfund Site Supplemental Remedial Investigations/ Feasibility Studies, Area 1 Supplemental Remedial Investigation Report. Georgia-Pacific LLC, February 2012a.
2. Allied Paper, Inc./Portage Creek/ Kalamazoo River Superfund Site Supplemental Remedial Investigations/ Feasibility Studies, Area 1 Supplemental Remedial Investigation Report Appendix I4 – Crown Vantage Area Side Channel Sediment and Floodplain Soil Data. Georgia-Pacific LLC, February 2012b.
3. Fuglevand, P. F. and R. S. Webb (2012). Urban River Remediation Dredging Methods That Reduce Resuspension, Release, Residuals, and Risk. Proceedings of the Western Dredging Association (WEDA XXXII) Technical Conference and Texan A&M University (TAMU 43) Dredging Seminar, San Antonio, TX.
4. CDM Smith. Memorandum from Scott Kirchner to Daniel Peabody, dated October 15, 2018. Working Draft Summary of Area 1 Split Sample Evaluations.
5. CDM Smith. Memorandum from Scott Kirchner to Daniel Peabody, dated November 28, 2018. Summary of Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site, Operable Unit 5, Area 1 Polychlorinated Biphenyl Congener and Aroclor Split Soil Samples.
6. CDM Smith. 2018. Area 1 2018 PDI FP Investigation, Test for Differences in Split Samples.

Verburg Park Pond Dredge Prisms



Crown Vantage Dredge Prisms

